

## CLAIMS

What is claimed is:

1           1.       An information handling system having a DC-DC standby voltage converter, said  
2 information handling system comprising:  
3                   information handling equipment having a plurality of devices requiring a plurality  
4 of standby voltages; and  
5                   a DC-DC standby voltage converter comprising:  
6                   a plurality of sequencers, each of the plurality of sequencers having a first input, a  
7 first output and a control input, wherein a voltage on the first input is sequenced on and  
8 off at the first output depending upon a logic state at the control input; and  
9                   at least one charge pump having a second input, a second output, and voltage  
10 adjustment input, wherein the second input has a voltage of a first value and the second  
11 output has a voltage of a second value, whereby the voltage adjustment input determines  
12 the second voltage value;  
13                   wherein the first input of at least one of the plurality of sequencers is  
14 coupled to the second output of the at least one charge pump and receives the  
15 second voltage value therefrom; and  
16                   the plurality of devices are coupled to the first outputs of the plurality of  
17 sequencers and receive the plurality of standby voltages therefrom.

1           2.     The information handling system according to claim 1, wherein the plurality of  
2 standby voltages are sequenced on and off with the plurality of sequencers in a predetermined  
3 order.

1           3.     The information handling system according to claim 2, wherein the predetermined  
2 order is programmable.

1           4.     The information handling system according to claim 1, wherein the standby  
2 voltages are of different voltage values.

1           5.     The information handling system according to claim 1, wherein the first voltage  
2 value is greater than the second voltage value.

1           6.     The information handling system according to claim 1, wherein the first voltage  
2 value is less than the second voltage value.

1           7.     The information handling system according to claim 1, wherein the first voltage  
2 value is substantially equal to the second voltage value.

1           8.     The information handling system according to claim 1, further comprising an  
2 enable input for enabling and disabling the first outputs of the plurality of sequencers.

1           9.     The information handling system according to claim 8, wherein the first outputs  
2 are in a high impedance state when disabled.

1        10.    The information handling system according to claim 1, further comprising:  
2                a multiplexer having at least two inputs, an output and a control input, wherein the  
3        control input determines which one of the at least two inputs is coupled to the output; and  
4                the output of the multiplexer is coupled to the first inputs of those plurality of  
5        sequencers not coupled to the at least one charge pump and the second input of the at  
6        least one charge pump.

1        11.    A DC-DC standby voltage converter, comprising:  
2                a plurality of sequencers, each of the plurality of sequencers having a first input, a  
3        first output and a control input, wherein a voltage on the first input is sequenced on and  
4        off at the first output depending upon a logic state at the control input; and  
5                at least one charge pump having a second input, a second output, and voltage  
6        adjustment input, wherein the second input has a voltage of a first value and the second  
7        output has a voltage of a second value, whereby the voltage adjustment input determines  
8        the second voltage value;  
9                wherein the first input of at least one of the plurality of sequencers is coupled to  
10       the second output of the at least one charge pump and receives the second voltage value  
11       therefrom.

1        12.    The DC-DC standby voltage converter according to claim 11, wherein the  
2        voltages at the first outputs are sequenced on and off in a predetermined order.

1        13.    The DC-DC standby voltage converter according to claim 12, wherein the  
2        predetermined order is programmable.

1           14.    The DC-DC standby voltage converter according to claim 11, wherein the  
2    voltages at the first outputs are of different voltage values.

1           15.    The DC-DC standby voltage converter according to claim 11, wherein the first  
2    voltage value is greater than the second voltage value.

1           16.    The DC-DC standby voltage converter according to claim 11, wherein the first  
2    voltage value is less than the second voltage value.

1           17.    The DC-DC standby voltage converter according to claim 11, wherein the first  
2    voltage value is substantially equal to the second voltage value.

1           18.    The DC-DC standby voltage converter according to claim 11, further comprising  
2    an enable input for enabling and disabling the first outputs of the plurality of sequencers.

1           19.    The DC-DC standby voltage converter according to claim 18, wherein the first  
2    outputs are in a high impedance state when disabled.

1           20.    The DC-DC standby voltage converter according to claim 11, further comprising:  
2                   a multiplexer having at least two inputs, an output and a control input, wherein the  
3                   control input determines which one of the at least two inputs is coupled to the output; and  
4                   the output of the multiplexer is coupled to the first inputs of those plurality of  
5                   sequencers not coupled to the at least one charge pump and the second input of the at  
6                   least one charge pump.

1           21.    A method of providing sequenced standby voltages for an information handling  
2 system, said method comprising:

3                   providing a plurality of standby voltages for a plurality of devices in an  
4 information handling system;

5                   sequencing the plurality of standby voltages with a plurality of sequencers; and

6                   providing at least one standby voltage of the plurality of standby voltages with a  
7 charge pump, the at least one standby voltage having a different voltage value than the  
8 other ones of the plurality of standby voltages

1           22.    The method according to claim 21, wherein the step of sequencing further  
2 comprises the step of programming the sequencing order.

1           23.    The method according to claim 21, further comprising the steps of enabling and  
2 disabling the plurality of sequencers so that the plurality of standby voltages are on and off,  
3 respectively.

1           24.    The method according to claim 23, wherein the step of disabling further  
2 comprises the step of placing outputs of the plurality of sequencers to a high impedance.

1           25.    The method according to claim 21, further comprising the step of selecting  
2 between a plurality of standby voltage sources with a multiplexer.

26.    The method according to claim 21, further comprising the step of adjusting the at  
least one standby voltage having the different voltage value.